

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**



FILED

10-06-14
04:59 PM

Order Instituting Rulemaking Regarding
Policies, Procedures and Rules for
Development of Distribution Resources Plans
Pursuant to Public Utilities Code Section 769.

Rulemaking 14-08-013

(Filed August 14, 2014)

**REPLY OF ENVIRONMENTAL DEFENSE FUND TO INITIAL RESPONSES TO
QUESTIONS POSED IN THE AUGUST 14, 2014 ORDER INSTITUTING
RULEMAKING**

Jennifer L. Weberski
Consultant on behalf of
Environmental Defense Fund
49 Terra Bella Drive
Walnut Creek, CA 94596
Phone: (703) 489-2924
Email: jleesq@yahoo.com

Larissa Koehler
Attorney
Environmental Defense Fund
123 Mission Street, 28th Floor
San Francisco, CA 94105
Phone: (415) 293-6093
Email: lkoehler@edf.org

October 6, 2014

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking Regarding
Policies, Procedures and Rules for
Development of Distribution Resources Plans
Pursuant to Public Utilities Code Section 769.

Rulemaking 14-08-013

(Filed August 14, 2014)

**REPLY OF ENVIRONMENTAL DEFENSE FUND TO INITIAL RESPONSES TO
QUESTIONS POSED IN THE AUGUST 14, 2014 ORDER INSTITUTING
RULEMAKING**

I. INTRODUCTION

Environmental Defense Fund (“EDF”) thanks the California Public Utilities Commission (“CPUC”) for the opportunity to file reply comments in this Distribution Resource Plan (“DRP”) proceeding. A number of key issues were raised in various parties’ responses to the CPUC’s initial set of questions that merit in-depth examination, and, ultimately, resolution. These include:

- How to define “optimal locations” for the development of DRPs in ways that maximize benefits to ratepayers and the environment.
- How to properly structure and attach values to DRPs and transparently convey those to ratepayers and third parties.
- The need to develop appropriate reliability and resiliency criteria that fully reflect and value the benefits of the diverse portfolio of assets that should be fostered in individual DRPs.

- How to address distributed energy resources (“DER”) ownership issues.
- The necessity of creating standard, transparent, methods to evaluate and transmit data that can be used to incent entrepreneurial and innovative least-cost best-fit solutions
- How best to foster competitive, market-based pathways to integrate DER into California Independent System Operator (“CAISO”) markets and operations.
- The timing and phasing of an ongoing DRP process at the CPUC.

EDF recommends that all of these issues be considered as part of this proceeding. Of immediate interest is the need for particular, the Commission to finalize a procedural scope and schedule that enables the investor-owned utilities (“IOUs”) to meet statutory requirements in ways that enable them, ratepayers, and third-parties to fully harvest the potential offered by the DRP process.

EDF notes at the outset one important issue that should be included in the scope: utilizing the DRP process to spur consideration and comparison of alternative combinations of DERs within a given optimal DRP location. Different combinations of resources could yield different results, with varying effects on the system. In this respect, EDF does support the notion of requiring consideration of DER alternatives, and evaluation using resource cost tests, environmental impacts, and the state’s existing Loading Order. Example of alternative analyses processes include requirements in Environmental Impact States per NEPA and section 404(b)(1) of the Federal Clean Water Act.

II. DISCUSSION

1. Optimal Locations for DRPs Should be Defined by Potential Benefits to Ratepayers and the Environment

As indicated in Public Utilities Code Section 769, “...each electrical corporation shall submit to the commission a distribution resources plan proposal to identify optimal locations for the deployment of distributed resources.”¹ “Optimal” is not defined. Various parties, including Environmental Defense Fund² offered recommendations on how best to demarcate what is “optimal” with a call for the Commission to provide broad guidance to IOUs and third parties which offers regulatory certainty related to pathways for DRP development over the next two or three decades.

EDF stresses that “optimal” should be from the perspective of the system as a whole, ratepayers, and the environment, while the distribution grid also accommodates the needs of individual energy users. EDF notes the challenge of finding the right balance between unfettered consumer access to the distribution system and the necessity of nurturing a grid that meets the state’s overall goals, as suggested by some parties.

For example, the Alliance for Retail Energy Markets (“AREM”) states,

*...in many cases, DERs will be deployed in connection with customers’ desires to better manage their energy usage and costs at their homes or business sites, and to meet their environmental goals; therefore the idea of “optimal locations” must not be focused entirely on the distribution system itself. Instead, consideration of optimal locations must include a full understanding of customer’s goals in deploying DERs.*³

¹ California Public Utilities Code § 769(b).

² *Comments and Responses of Environmental Defense Fund to Questions Posed in the August 14, 2014 Order Instituting Rulemaking*, Order Instituting Rulemaking Regarding Policies, Procedures and Rules for Development of Distribution Resources Plans Pursuant to Public Utilities Code Section 769, R. 14-08-013 (filed Sep. 5, 2014).

³ *Comments of the Alliance for Retail Energy Markets on Order Instituting Rulemaking*, Order Instituting Rulemaking Regarding Policies, Procedures and Rules for Development of Distribution Resources Plans Pursuant to Public Utilities Code Section 769, R. 14-08-013 at 4 (filed Sep. 5, 2014) (OIR).

And according to Walmart,

*The DRPs should also ensure that the IOUs' distribution systems are sufficiently robust to accommodate not only existing DERs but also significant amounts of incremental DERs, and that the IOUs' maintain and operate their systems in a manner that ensures every stakeholder can safely and effectively deploy new DERs within agreed upon guidelines and nondiscriminatory rules.*⁴

EDF agrees that customer preferences should be thoughtfully considered in DRP development, and the greatest possible access should be provided to DER. However, the distribution system serves as a type of common or public good, and should not be narrowly planned around individual customers' preferences. Instead, distribution areas should be selected and developed to widely meet societal goals, with the associated values communicated transparently through tariffs and other pricing mechanisms which enable customers and third parties to adopt DER in ways that create value for themselves, ratepayers as a whole, and the environment.

In this context, EDF generally agrees with The Vote Solar Initiative ("Vote Solar") that "...the Commission should focus on providing a modernized electric grid that (1) serves as a backbone to facilitate access to..." DER and "... (2) provides open access to DER providers..."⁵ However, by specifically directing the IOUs to develop DRPs in optimal locations, the California Legislature rightly recognizes that some places are more beneficial (and potentially less expensive) hosts for DER than others; it is these locations that should serve as platforms for DRPs.

⁴ *Response of Wal-Mart Stores, Inc. and Sam's West, Inc. to Order Instituting Rulemaking*, Order Instituting Rulemaking Regarding Policies, Procedures and Rules for Development of Distribution Resources Plans Pursuant to Public Utilities Code Section 769, R. 14-08-013 at 3 (filed Sep. 5, 2014) (OIR).

⁵ *Id.* at 1.

2. Proper Values Must be Transparently Attached to DRPs

There was widespread agreement among parties of the need to incorporate transparent, salient, and transactional values into DRP development, either directly or through associated proceedings.⁶ For example, EDF strongly agrees with Pacific Gas and Electric Company's ("PG&E") recommendation that

*...the Rulemaking at this early stage provide an inventory of existing tariffs, utility procedures, customer programs and operating protocols that affect the timely integration of distributed resources at all relevant points on the electric distribution system. This inventory should also include a discussion of where the existing tariffs and procedures may be perceived to act as barriers to the development and integration of distributed resources under various scenarios of market penetration and customer needs, and how those barriers can be removed.*⁷

EDF also supports San Diego Gas and Electric Company's ("SDG&E") recommendation that

*To create economic incentives for DER performance, and to provide compatible consumption signals for end-use consumers, retail commodity rates need to be far more location-specific and time-differentiated than is currently the case.*⁸

and

*...utilities should be compensated for the services the utility provides to customers, and that DERs should be compensated for the services provided by DERs. Rate reform is essential to ensure this is accomplished.*⁹

⁶ In their comments Nest stated that it believes that while price signals can play an important role, the fear that overreliance on them risks oversimplifying multifactor residential energy consumption decisions. *Response of Nest Labs, Inc. to the Distribution Resources Rulemaking*, Order Instituting Rulemaking Regarding Policies, Procedures and Rules for Development of Distribution Resources Plans Pursuant to Public Utilities Code Section 769, R. 14-08-013 at 7 (filed Sep. 5, 2014) (OIR). EDF is unclear what Nest means by "over-reliance," but believes that prices, supplemented by necessary information and education, should be seen by the Commission as the essential means of enabling energy users to make good decisions.

⁷ *Comments and Responses to Questions of Pacific Gas and Electric Company (U 39 E)*, Order Instituting Rulemaking Regarding Policies, Procedures and Rules for Development of Distribution Resources Plans Pursuant to Public Utilities Code Section 769, R. 14-08-013 at 2 (emphasis added) (filed Sep. 5, 2014) (OIR).

⁸ *Responses of San Diego Gas & Electric Company (U 902-E) to Questions Posed in Order Instituting Rulemaking and Comments Addressing Scope*, Order Instituting Rulemaking Regarding Policies, Procedures and Rules for Development of Distribution Resources Plans Pursuant to Public Utilities Code Section 769, R. 14-08-013 at 3 (filed Sep. 5, 2014) (OIR).

⁹ *Id.* at 8.

Likewise, EDF concurs with Vote Solar that

*Rates, in turn, should provide clear price signals to market participants that result in cost-efficient outcomes, should promote a more-efficient use of IOU infrastructure, and should be calibrated to avoid unnecessary infrastructure investments.*¹⁰

and with PG&E that

*Each DRP should propose cost-effective methods of effectively coordinating existing commission-approved programs, incentives, and tariffs to maximize the locational benefits and minimize the incremental costs of distributed resources.*¹¹

A number of pricing mechanisms should be considered in this proceeding to convey the value of DER deployment as part of the DRPs. These could include location-specific adders to existing tariffs and programs, request for offers, direct compensation, tailored time variant rates, new tariffs that incentivize non-exporting distributed generation (“DG”) systems and DG systems that export on-peak, so as to better align load and generation, as well as to encourage load shifting, energy efficiency, and demand response in lieu of expensive infrastructure. In addition, the Commission should consider unbundling ancillary services to provide price signals for alternative supply resources and putting into place innovative tariffs for fleets of DERs that can be dispatched day-ahead and/or in real time to provide ramping, frequency support, voltage support, and other ancillary services.¹² The Office of Ratepayer Advocates’ (“ORA”) suggestion to consider one-time incentive payments to encourage DER development in regions or substations where particularly substantial benefits can be harvested also has merit.¹³

EDF also generally agrees with San Diego Gas and Electric’s statement that

To realize the benefits of DERs, the rules governing performance of DERs must be changed and the IOUs’ existing retail rate structures must be modified. If DERs are to be

¹⁰ *Vote Solar’s Responses to Questions Posed in the Commission’s Order Instituting Rulemaking* at 2.

¹¹ *Comments and Responses to Questions of Pacific Gas and Electric Company (U 39 E)* at 2-A.

¹² *Vote Solar’s Responses to Questions Posed in the Commission’s Order Instituting Rulemaking* at 6, 8-9.

¹³ *Comments of the Office of Ratepayer Advocates on Policies, Procedures and Rules for Development of Distribution Resources Plans*, Order Instituting Rulemaking Regarding Policies, Procedures and Rules for Development of Distribution Resources Plans Pursuant to Public Utilities Code Section 769, R. 14-08-013 at 11 (filed Sep. 5, 2014) (OIR).

*compensated for deferring or eliminating traditional infrastructure projects, DERs must have physical performance requirements with appropriate penalty provisions for non-performance.*¹⁴

EDF believes that DRPs offer an opportunity to maximize benefits to the system by extracting as much locational value as possible. While basic DER programs should be encouraged throughout utility service territories, where merited by underlying costs and value, “locational adders” or pricing mechanisms should fully reflect the location-specific value that can be extracted. As stated by Solar City, the methods used to calculate optimal DER locations should translate into an incentive for customers to deploy these resources in high value areas.¹⁵

3. New Methods to Measure Reliability and Resiliency are Needed

One of the benefits of DER, if deployed effectively, is that a larger number of diverse supply and demand resources can provide for greater overall system reliability and increased resiliency. This asset should be fully reflected in valuation and measurement metrics. In particular, the Commission should avoid replicating the reliability criteria currently used for the large “spoke and wheels” legacy generation system. Instead, an alternative, portfolio-based methodology that better reflects the reliability and resiliency values created by location-specific DER clusters should be devised. In addition, IOU efforts to “belt and suspender” the distribution system should be resisted.

For example, Southern California Edison Company (“SCE”) asserts that reliability guidelines should include:

¹⁴ *Responses of San Diego Gas & Electric Company (U 902-E) to Questions Posed in Order Instituting Rulemaking and Comments Addressing Scope* at 3.

¹⁵ *Vote Solar’s Responses to Questions Posed in the Commission’s Order Instituting Rulemaking* at 7.

...a distribution system that can support a “one in ten year heat event” and that can withstand an “N-1 scenario” (where there is loss of a critical system element such as a major transformer or circuit) without exposing customers to extended outages.¹⁶

And,

However, given the complexity and uncertainty inherent in changing the existing distribution planning process to incorporate reliance on new technologies in novel ways, SCE believes that where a DER project is relied upon for system reliability in lieu of a traditional capital investment, there should also be a parallel identification of a utility capital project that can be relied upon as a backstop.¹⁷

These approaches could result in a much more expensive distribution system than is needed to ensure the reliability of a DRP that’s populated by a large portfolio of DER. Of note, this is an outcome that Walmart explicitly wants to avoid – as they state, “leaving the answer completely up to the IOUs could lead to ‘gold plating’ and added expense for the ratepayer.”¹⁸

4. California Independent System Operator Integration

EDF believes that the Commission should identify appropriate standards for visibility and reliability, but favor cooperability over controllability, since ultimately DER deployment will not be controllable by location, and inevitably some DER may not want to give up control. As such, CAISO ought to think about market structures, such as the newly initiated EIM, that allow for an increasing diversity of attribute specification and market-place valuation, and these market evolutions will need to align in time with customer-side evolution in tariffs, technologies and practices.¹⁹ Creating any new requirements that go beyond information sharing related to California Independent System Operator (“CAISO”) integration should be done in favor of

¹⁶ *Southern California Edison Company’s (U 338-E) Comments on Order Instituting Rulemaking Regarding Policies, Procedures and Rules for Development of Distribution Resources Plans Pursuant to Public Utilities Code Section 769*, Order Instituting Rulemaking Regarding Policies, Procedures and Rules for Development of Distribution Resources Plans Pursuant to Public Utilities Code Section 769, R. 14-08-013 at 4 (filed Sep. 5, 2014) (OIR).

¹⁷ *Id.* at fn. 2.

¹⁸ *Id.* at 5.

¹⁹ Rocky Mountain Institute, *Rate Design for the Distribution Edge: Electricity Pricing for a Distributed Resource Future*, http://www.rmi.org/elab_rate_design#pricing_paper.

market-facilitating certainty with undue barriers to entry into the marketplace removed. For example, AReM asserts that:

Just as conventional generation resources have specific locational values, DERs too will confer locational value at the distribution level. Determining the precise locational value will require, at least to some extent, the IOUs' distribution systems operations to be integrated with the CAISO transmission system operations. The details of this integration should be a key focus of this proceeding, so that the locational benefits of DERs can be fully reflected and integrated into the resource adequacy construct for which the CAISO and CPUC share jurisdiction. In addition to integration of the transmission and distribution operations, the markets that are managed by the CAISO need to include these new resources in a transparent manner so that parties who buy and sell DERs can manage the risks involved in deploying these new technologies.²⁰

This approach might represent an optimal end-state, but could take time to achieve, and the sole pursuit of comprehensive CAISO integration could impede DER progress at the distribution level. Until full integration into CAISO's supply market, DER that can directly participate in CAISO markets should be encouraged to do so, while the rest of these resources should be comprehensively credited as part of California Energy Commission forecasts that feed into determination of resource adequacy ("RA") requirements. In addition, DER should be compensated through tariff design, rebates, and other reward systems, including DER that cannot cost-effectively bid into the CAISO market or that is not ready to do so.

This approach mirrors SolarCity Corporation's ("SolarCity") recommendation that "small residential and commercial DER assets should be considered as load modification rather than generation in respect to distribution planning and network upgrade cost allocation."²¹ Over time,

²⁰ *Comments of the Alliance for Retail Energy Markets on Order Instituting Rulemaking*, Order Instituting Rulemaking Regarding Policies, Procedures and Rules for Development of Distribution Resources Plans Pursuant to Public Utilities Code Section 769, R. 14-08-013 at 4 (filed Sep. 5, 2014) (OIR).

²¹ *Comments of SolarCity Corporation on the Order Instituting Rulemaking*, Order Instituting Rulemaking Regarding Policies, Procedures and Rules for Development of Distribution Resources Plans Pursuant to Public Utilities Code Section 769, R. 14-08-013 at 8 (filed Sep. 5, 2014) (OIR).

as barriers to market entry are overcome, greater levels of supply DER can be directed to the CAISO market.

6. Standardization of DRP Proceedings

EDF agrees with Enernoc, Inc., Johnson Controls, Inc., and Comverge, Inc. (“Joint Demand Response Parties”) “...that guiding principles for this rulemaking include greater transparency and coordination in resource decisions.”²² To this end, EDF similarly concurs with Qado Energy, Inc. and the Mission: Data Coalition that the need for a ways to implement standardization should be considered in this proceeding. As stated by the Coalition, this will help the Commission achieve “...goals of technical uniformity across service territories and the elimination of barriers to DER participation.”²³

EDF also agrees with Alarm.com and Energy Hub that regulatory efforts in New York could provide insights into how to ensure transparent, consistent and open mechanisms to share system information.²⁴

EDF supports the SDG&E notion offered by SDG&E DER’s that “wish to be compensated for reliability services” be required to meet certain performance standards because we see standards are needed for interoperability and cooperability between DERs within DRP locations and the grid writ large. However, overly-burdensome standards could potentially squelch innovation and undermine competition and customer choice through product differentiation. So the Commission, IOUs and other regulating entities will need to find a

²² *Joint Response of Enernoc, Inc., Johnson Controls, Inc., and Comverge, Inc. (“Joint Demand Response Parties”) to Rulemaking Questions*, Order Instituting Rulemaking Regarding Policies, Procedures and Rules for Development of Distribution Resources Plans Pursuant to Public Utilities Code Section 769, R. 14-08-013 at 7-8 (filed Sep. 5, 2014).

²³ *Responses of Mission:Data Coalition Regarding Distribution Resources Plan Proposals*, Order Instituting Rulemaking Regarding Policies, Procedures and Rules for Development of Distribution Resources Plans Pursuant to Public Utilities Code Section 769, R. 14-08-013 at 4 (filed Sep. 5, 2014).

²⁴ *Comments of Alarm.com and EnergyHub on Order Instituting Rulemaking*, Order Instituting Rulemaking Regarding Policies, Procedures and Rules for Development of Distribution Resources Plans Pursuant to Public Utilities Code Section 769, R. 14-08-013 at 5-6 (filed Sep. 5, 2014).

balance with standards that spur and facilitate competition without confounding it. For example, it may make more sense to ensure that the portfolio as a whole meet those standards, without requiring the same of every individual project. Ultimately, a workable set of performance standards could be developed for reliability that also helps to establish a competitive platform upon which DER solutions can compete by allowing the Commission to require that the IOUs accept any DRP proposal that meets rules for design standards, guarantees performance, and, for larger-scale projects, perhaps has backstop insurance and financial penalties if performance cannot be maintained.

7. Timing of DRP Deployment

There was widespread agreement among the parties that DRPs should be developed and integrated into regulatory and IOU proceedings, practices, programs, and tariffs through an ongoing process. For example, SolarCity suggests that feeder-, substation-, and distribution area plans be developed over five, 10 or more years.²⁵ CESA recommends a phased roll-out of DRPs.²⁶ Green Power proposes that the Commission adopt a cycle for revising the DRPs, and a plan for ongoing monitoring of plan progress, with three-to-five year cycles between major overhauls of the plans, bolstered by annual progress reports and reviews.²⁷ Natural Resources Defense Council recommends that “...the Commission provide ample leeway for adjustments to the DRPs over time in order to account for changes to existing distributed energy resource programs and broader system changes...”²⁸

²⁵ *Comments of SolarCity Corporation on the Order Instituting Rulemaking* at 10.

²⁶ *Response of the California Energy Storage Alliance on Order Instituting Rulemaking*, Order Instituting Rulemaking Regarding Policies, Procedures and Rules for Development of Distribution Resources Plans Pursuant to Public Utilities Code Section 769, R. 14-08-013 at 10 (filed Sep. 5, 2014).

²⁷ *Comments of the Green Power Institute on the OIR*, Order Instituting Rulemaking Regarding Policies, Procedures and Rules for Development of Distribution Resources Plans Pursuant to Public Utilities Code Section 769, R. 14-08-013 at 8 (filed Sep. 5, 2014).

²⁸ *Comments of the Natural Resources Defense Council (NRDC) on the Order Instituting Rulemaking Regarding Policies, Procedures and Rules for Development of Distribution Resources Plans Pursuant to Public Utilities Code*

SCE's also suggests that there should be updates to the plans, in which DRP submissions become a regular part of general rate cases:

*SCE believes the DRPs should continue to be monitored following Commission approval, with an update approximately every three years. This update should include data that tracks DER penetration by DER type, as well as data that tracks DER capabilities and performance at each identified optimal location. This will permit integration of additional data, technology and knowledge that was developed since the previous DRP filing. This will also permit the Commission to measure the benefits of the DRP and evaluate its strengths and weaknesses.*²⁹

At the same time, EDF has a more expansive view of what issues are foundational for regular review than the utility.³⁰ As previously discussed, these should include consideration of pricing, ownership, reliability/resiliency, standardization, and, of course, definition of optimal location. As well, consideration be given to how to evaluate a DRP; how stakeholders and the Commission will determine if a DRP sufficiently supports the pursuit of pressing state environmental and clean energy goals.

Section 769, Order Instituting Rulemaking Regarding Policies, Procedures and Rules for Development of Distribution Resources Plans Pursuant to Public Utilities Code Section 769, R. 14-08-013 at 7 (filed Sep. 5, 2014).

²⁹ *Southern California Edison Company's (U 338-E) Comments on Order Instituting Rulemaking Regarding Policies, Procedures and Rules for Development of Distribution Resources Plans Pursuant to Public Utilities Code Section 769* at 14.

³⁰ *Comments and Responses of Environmental Defense Fund to Questions Posed in the August 14, 2014 Order Instituting Rulemaking*, Order Instituting Rulemaking Regarding Policies, Procedures and Rules for Development of Distribution Resources Plans Pursuant to Public Utilities Code Section 769, R. 14-08-013 at 5 (filed Sep. 5, 2014).

III. CONCLUSION

EDF thanks the Commission for the opportunity and looks forward to its continued involvement in this proceeding.

Respectfully signed and submitted on October 6, 2014

ENVIRONMENTAL DEFENSE FUND

/s/ Jennifer L. Weberski
Jennifer L. Weberski
Consultant on behalf of
Environmental Defense Fund
49 Terra Bella Drive
Walnut Creek, CA 94596
Phone: (703) 489-2924
Email: jleesq@yahoo.com

/s/ Larissa Koehler
Larissa Koehler
Attorney
Environmental Defense Fund
123 Mission Street, 28th Floor
San Francisco, CA 94105
Phone: (415) 293-6093
Email: lkoehler@edf.org